

CLAIMS

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008-E
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008-G

W S 1-H A method for producing human cell-lines comprising:

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- a) immortalising a human undifferentiated or precursor cell of a given tissue type using an immortalising agent which includes or has associated therewith a control means whereby activation of the control means terminates immortalisation and allows differentiation of the undifferentiated or precursor cell,
 - b) culturing said immortalised cell in order to produce a homogeneous population of human cells,
 - c) activating the control means in order to terminate immortalisation and activate differentiation; and
 - d) allowing differentiation of said cells so as to produce fully differentiated cells of said given tissue type.
- W S 1-H

2. A method according to Claim 1 wherein said immortalising agent is an immortalising gene.

15 3. A method according to Claim 2 wherein said gene is a viral oncogene.

W S 4. A method according to Claims 1, 2 or 3 wherein said immortalising agent is a construct.

5. A method according to Claim 4 wherein said construct is a retroviral construct.

6. A method according to Claims 1 to 5 wherein said control means is responsive to environmental conditions.

7. A method according to any preceding Claim wherein said immortalising agent and control means are integrated.

8. A method according to Claim 7 wherein said integrated immortalisation agent and control means comprise a temperature sensitive entity.

9. A method according to Claim 8 wherein said entity is an oncogene.

10. A method according to Claims 8 or 9 wherein the immortalising agent is SV40T antigen.

11. A method according to Claim 1 wherein said immortalising agent is a chemical means.

12. A method according to Claim 1 wherein said immortalising agent is a physical means.

13. A method according to any preceding claim wherein the process of allowing differentiation of said cells involved exposure of said cells to a differentiating agent.

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12, 13
15 for &

(not for
AGENT -
many
times)

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14. A method according to Claim 13 wherein said agent is Vitamin D₃.
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15. A method according to Claims 13 or 14 wherein said agent is Vitamin K, either alone or in combination with Vitamin D₃.
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16. A method according to Claim 13 wherein said agent, is dexamethasone.
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17. A method according to Claim 13 wherein said agent is, rabbit serum or an extract thereof.
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18. A method according to any preceding claim which method further involves immortalisation of a human undifferentiated or precursor cell with an immortalising agent and also a safety means which enables selective disabling and/or destruction of said cell-line.
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19. A method according to Claim 18 wherein said method involves transfection of said cell-line with a gene which in the presence of certain agents produces a cytotoxic effect and/or product.
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20. A method according to Claim 19 wherein said gene is viral thymidine kinase.
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21. A method according to Claim 19 wherein said gene is cytosine deaminase.
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22. A method according to Claim 18 wherein transcription of the immortalising agent also results in transcription of the safety means.
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W 1 S 23. Cells or cell-lines produced in accordance with the method of the invention.

OMNIBUS

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W, E
(A1
Above)

W H S 24. Cells or cell-lines according to Claim 23 comprising at least one homogeneous population of immortalised cells provided with means to terminate immortalisation such that a homogeneous population of differentiated cells is provided.

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W, E
(A1
Above)

X 25. Cells or cell-lines according to Claims 23 or 24 comprising at least one safety means in accordance with the invention.

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W H S 26. Cells or cell-lines according to Claims 22 to 25 wherein said cells or cell-lines are of human origin.

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OBJECT - 175 - AMENDMENT LIMITED TO P. 175

W H S 27. Use of immature, undifferentiated or precursor cells to produce terminally differentiated human cell-lines that express tissue-specific functions.

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